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November 12, 2015

VIA ECFS

Marlene H. Dortch, Esq.
Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, D.C. 20554

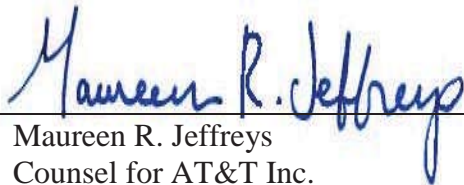
**Re: *Applications of Charter Communications, Inc., Time Warner Cable Inc., and
Advance/Newhouse Partnership for Consent To Transfer Control of Licenses
and Authorizations, MB Docket No. 15-149***

Dear Ms. Dortch:

Please find attached an economic analysis by Dr. Marius Schwartz. Dr. Schwartz's analysis comments on the previously submitted economic analysis from Dr. Fiona Scott Morton regarding the scope for coordinated interaction by Comcast and New Charter post-merger to exclude Online Video Distributors.¹

Please contact me at (202) 942-6608 or Maureen.Jeffreys@aporter.com if you have any questions.

Respectfully submitted,


Maureen R. Jeffreys
Counsel for AT&T Inc.

Enclosure

¹ Statement of Dr. Fiona Scott Morton re the Merger of Charter, TWC, and BHN ¶¶ 143-197 (filed Nov. 2, 2015).

**Comments on Dr. Scott Morton's Analysis of
Coordinated Foreclosure of OVDs**

Dr. Marius Schwartz

November 12, 2015

I. QUALIFICATIONS, ASSIGNMENT, AND OVERVIEW

I am a Professor of Economics at Georgetown University. My teaching and research concentrate on industrial organization, competition, and regulation, encompassing such topics as vertical control, network effects, and exclusionary conduct. I have published extensively on these and other topics in leading economic journals. I hold a B.Sc. degree from the London School of Economics with 1st class honors, and a PhD, also in economics, from the University of California at Los Angeles.

From June 2011 to December 2012, I was Chief Economist of the U.S. Federal Communications Commission. From September 1998 through April 2000, I served at the Antitrust Division of the U.S. Department of Justice (DOJ) as Economics Director of Enforcement, and for six months also as Acting Deputy Assistant Attorney General for Economics (chief economist). From April 1995 to June 1996, I was the Senior Economist for industrial organization at the President's Council of Economic Advisers. I have consulted for the DOJ, FTC, and private parties on various regulatory and antitrust matters, including alleged collusion. My curriculum vitae is attached.

Counsel for AT&T has asked me to review and comment on the economic analysis by Dr. Fiona Scott Morton of the scope for coordinated interaction to exclude Online Video Distributors (OVDs) by Comcast and New Charter post merger.¹ My analysis is based on economic principles and publicly available industry data.

¹ Statement of Dr. Fiona Scott Morton re the Merger of Charter, TWC, and BHN, November 2, 2015, section VIII (¶¶ 143-197).

Dr. Scott Morton argues that coordinated exclusionary action is “very unlikely” (¶ 144).² I summarize her arguments in Section II below, and comment on them in Section III. Although I agree that coordinated action requires overcoming several hurdles and is far from automatic, I explain why Dr. Scott Morton’s analysis significantly overstates the difficulty of harmful coordination between Comcast and New Charter. The proposed merger relaxes obstacles to coordinated exclusionary action, and under certain circumstances the scope for such conduct in the cable industry could be significant.

II. SUMMARY OF THE ARGUMENTS

The theory of harm considered by Dr. Scott Morton is “whether New Charter and Comcast could and would collude to harm or eliminate independent OVD networks. By doing so, they would control more aspects of OVD development and access to viewers. Such control would potentially result in greater financial benefit in the combined OVD-MVPD businesses.” (¶ 156)³

Assuming that New Charter and Comcast both want to harm OVDs, tacit collusion (referred to in the Merger Guidelines as one form of “coordinated interaction”)⁴ would be

² Dr. Scott Morton suggests that the basic premise for coordinated exclusion is false, because New Charter could not hope to gain from such exclusion. (¶¶ 160, 168-169) I have not studied the issue in detail but, as did Dr. Scott Morton (¶ 170), I will analyze the scope for coordinated action assuming both parties had a motive to exclude OVDs.

³ Dr. Scott Morton only considers coordinated action to exclude competition from OVDs, as opposed to non-cable MVPD and broadband competitors. Accordingly, I will limit my analysis to that scenario, although some of my remarks apply more broadly.

⁴ “Coordinated interaction involves conduct by multiple firms that is profitable for each of them only as a result of the accommodating reactions of the others. . . . Coordinated interaction also can involve a similar common understanding that is not explicitly negotiated but would be enforced by the detection and punishment of deviations that

more profitable than acting alone because of externalities between the firms. A firm engaging in an output reduction or price increase cannot capture all the benefits; its competitors benefit as well. Although cable companies do not compete for subscribers, due to their geographically disparate franchises, they have a common interest in excluding shared rivals. Thus, the basic logic regarding the benefits of coordinated action is similar:

According to the externalities theory, both New Charter and Comcast would gain from costly actions to disadvantage OVDs. However, the gain would be spread across other MVPDs in the market. In the case where the benefit to one firm was lower than the cost of the action, it would not be taken. The key under this theory is that when both firms take the costly action, the combined gain to either one outweighs the cost of the individual action. (¶ 157)⁵

Turning to potential exclusionary actions, Dr. Scott Morton argues that the obvious ones—restricting OVD access to subscribers, directly through limiting interconnection or indirectly through practices such as data caps on subscribers—are very unlikely because the FCC will enforce New Charter’s commitments. (¶ 160) But she notes there are non-regulated actions that might theoretically disadvantage OVDs. In particular, she posits Comcast and New Charter contracting with program suppliers to restrict OVD access to content. Such provisions may involve: MFN clauses that prevent OVDs from obtaining low prices; exclusivity clauses that deny content to OVDs outright; or limited exclusivity clauses that allow OVDs access to content only after a significant time lag. (¶ 161)

would undermine the coordinated interaction.” U.S. Department of Justice and the Federal Trade Commission, *Horizontal Merger Guidelines*, issued August 19, 2010, § 7.

⁵ Instead of a discrete action which will be taken or not, one can apply the same logic to costly exclusionary actions that can take different levels: with collusion, the firms will choose higher levels than if acting unilaterally.

Having presented this theory, Dr. Scott Morton contends that it has major weaknesses. Specifically, she argues it would be too difficult for Comcast and New Charter to coordinate their contracting with programmers (§ 164); to observe whether the other has complied with the agreement or “cheated,” given the lack of transparency of MVPD contracts with programmers (§ 181); and to punish any cheating swiftly and sufficiently. Here, cheating would involve Comcast, say, forgoing an exclusionary OVD provision in its contract with program supplier X, to avoid the higher payment for this provision, and punishment would involve New Charter retaliating by forgoing a similar exclusionary provision when it negotiates with program supplier Y. But Dr. Scott Morton contends such retaliation would be too slow because significant terms in programming contracts come up for renegotiation only infrequently. (§§ 177-179) In addition, she rejects other enforcement mechanisms, such as withholding NBCU programming from New Charter or refusal by New Charter to carry such programming, as being very visible and expensive. (§§ 194-196)

Dr. Scott Morton proceeds to argue that, more generally, several industry conditions, which I describe in the next section, are unfavorable to coordinated exclusion.

III. COMMENTS ON THE ARGUMENTS

I will first address the specific theory of coordinated exclusion via contracts with program suppliers, and then the claims regarding general industry conditions.

Exclusionary Contracts for Programming

I agree that successful coordinated action requires reaching an “agreement,”⁶ monitoring compliance, and punishing cheaters. But Dr. Morton has overstated the difficulties New Charter and Comcast would face in this particular context.

Reaching an Agreement: In the hypothesized scheme, New Charter and Comcast—to avoid “paying twice” for the same exclusionary provisions against OVDs—would allocate among themselves different programmers from which each would seek such provisions. Dr. Scott Morton questions how an understanding could be reached as regards what exclusionary provisions to seek and which firm is responsible for seeking them from a particular program supplier without explicit communication. (¶ 164) While it is true that this particular form of coordination would require some degree of communication, plausible mechanisms can be envisioned. For instance, one cable company could signal to the other an intent to restrict OVD access to programming through public statements to industry analysts or at other industry events regarding its strategies for online access to content, perhaps under the heading of how it intends to differentiate its pay-TV offerings. As for assigning responsibilities, the fact that different cable companies’ contracts with different content providers expire at different times could make it possible for them to

⁶ For purposes of this analysis, “agreement” refers to a common understanding, not a formal legal agreement. *See* fn. 4 above.

develop an alternation scheme to determine which company will bargain for exclusionary terms with a given program supplier. The issue of communication deserves further analysis, but it is worth noting that communication need not be perfect in order for firms to reach a common understanding about profitable coordinated action.

Monitoring Compliance. Dr. Scott Morton argues that programming contracts are highly confidential, so that New Charter and Comcast each would have great difficulty verifying whether the other firm indeed implemented the required exclusionary provisions against OVDs. While this argument may be true with respect to pricing, there are other exclusionary provisions whose effect would be quite visible. For example, whether an OVD like Netflix or Hulu obtained a program or not, and if it did obtain it, how soon after the program first was shown can be monitored from public information.⁷

Punishing Cheaters. Recall the scenario: if Comcast, say, cheats by forgoing an exclusionary OVD provision in its contract for program X, New Charter would be able to retaliate (by forgoing a similar exclusionary provision) when its turn arises to negotiate a contract. Even if any particular contract is renegotiated only infrequently—i.e. is fixed for a number of years—the relevant question is whether *some* significant contract comes up for renegotiation fairly frequently. If a cable company's contracts for various programs are staggered, then renegotiations can occur fairly frequently even if the average contract

⁷ Indeed, Dr. Scott Morton points out that "Some actions, such as including an OVD on a program guide, [in violation of a hypothesized exclusionary scheme] could be visible." (¶ 181, fn. 218)

length is substantial. If so, the opportunity to “retaliate” against cheating would arise more often and more quickly.⁸

General Industry Conditions Are Supposedly Unfavorable to Coordinated Action

Dr. Scott Morton further contends that several factors that, under some conditions, may facilitate collusion, such as high concentration and entry barriers, are not relevant here; while other industry conditions disfavor anti-competitive interaction here, including various asymmetries between New Charter and Comcast, e.g. in their attitudes towards OVDs, discount rates and program ownership (¶¶ 186-193). And she states that the lack of any history of collusion against OVDs by the merging firms—Charter, TWC and BHN—“is consistent with collusion being an undesirable strategy, very difficult for these firms to achieve, or both.” (¶ 172)

Concentration and Entry Barriers. In line with prevailing economic thinking, Dr. Scott Morton states that factors such as a small number of competitors, concentrated market shares, and high entry barriers facilitate collusion in the standard case involving competitors selling to customers. (¶ 175) But she incorrectly argues that these factors are not relevant for the theory at hand, which involves coordinated actions to exclude OVDs (¶ 176). If a subset of cable companies coordinate to take costly actions that exclude OVDs, the share of the gains that are internalized by the excluding group will vary with their share of the relevant market and the size of the entry barriers. In addition, as Dr. Scott Morton

⁸ Moreover, the ability to punish a cheater can arise even before a contract is re-negotiated: the punishing firm could unilaterally waive the exclusionary restriction against OVDs for which it had paid a premium initially, a waiver that the program supplier would welcome (though the more cost-effective way to retaliate is to refrain from paying for an exclusionary provision at contract renewal, thereby saving the premium).

observes, coordination requires agreement and monitoring—both of which become easier with a smaller number of significant players.

Lack of Collusion History. The absence of a history of collusion against OVDs, while “consistent” with the explanations hypothesized by Dr. Scott Morton, is certainly not dispositive as regards to what might happen post merger. For one thing, the possibility that OVDs could seriously threaten cable companies is a relatively recent phenomenon. Moreover, the proposed merger creates a substantial change in cable market structure: New Charter will be fifty percent larger than Time Warner Cable and several times larger than either current Charter or BHN, and roughly comparable in size to Comcast. As noted above, agreeing upon terms of coordination and monitoring become easier with fewer major players. Thus, the absence of past coordinated exclusionary behavior when the industry was more fragmented does not eliminate concerns in a post merger environment.

Asymmetries. One type of asymmetry postulated by Dr. Scott Morton is different discount factors: specifically, New Charter is more “impatient.” However, differences in discount factors alone do not undermine the ability to sustain collusion. In the repeated-games approach to collusion (which Dr. Scott Morton cites), collusion requires that the discount factors of both firms exceed some critical threshold level, so that for each firm the punishment from cheating would outweigh the gains. Thus, the binding constraint is the discount factor of the “less patient” firm. Provided the discount factor of that firm exceeds this threshold, it does not matter whether the other firm’s discount factor is even higher.⁹

⁹ While Dr. Scott Morton suggests that New Charter will have pressing demands for “immediate cash flow” that will preclude it from investing in the delayed payoff from coordination, the Applicants themselves state that “[t]he total debt amount, when considered in the context of New Charter’s increased size, is therefore unremarkable and constructive.” *Opposition to Petitions To Deny and Response to Comments* at 81.

The argument that other asymmetries hinder collusion, notably by creating differences in their preferred collusive outcome, also is overstated. To the extent Comcast favors greater exclusion of OVDs than does New Charter, the impediments created by such asymmetries may be overcome if the firm that stands to gain more from exclusion has a way to compensate the other for accepting the first firm's position. In this particular context, several potential compensation vehicles come to mind. For example, under the maintained hypothesis that Comcast prefers more exclusion, Comcast could compensate New Charter for going along by offering it lower prices for NBCUniversal programming. Another vehicle may involve contracts to serve enterprise customers with locations straddling both firms' service areas. When partnering to serve such customers, Comcast could compensate New Charter for exclusionary actions by agreeing to accept a lower profit margin on the contract, thereby leaving more for New Charter. Yet another potential mechanism involves standards: when Comcast and New Charter have differing preferences over the standard for a future cable industry product, Comcast may accept New Charter's preferred option.

IV. CONCLUSION

I conclude that Dr. Scott Morton's analysis overstates in important ways the difficulties of coordinated action by major cable companies to exclude OVDs. I also note that her analysis did not purport to address exclusionary conduct against non-cable MVPD and broadband competitors, a goal that cable companies would naturally share.

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EDUCATION

University of California, Los Angeles: Ph.D. in Economics, September 1982
University of California, Los Angeles: M.A. in Economics, March 1978
London School of Economics: B.Sc. in Economics (1st Class Honors), August 1976

PROFESSIONAL EXPERIENCE

Georgetown University, Department of Economics

Professor, June 1993–present
Associate Professor, August 1987–May 1993
Assistant Professor, January 1983–July 1987 (part time in fall 1982)

Excellence in Undergraduate Teaching Award, Economics Department, 2001 and 2010
Director of Graduate Studies: spring 1993–spring 1995

Courses Taught: *Graduate*—Industrial Organization, Microeconomics for executives and policy makers, Macroeconomic Theory I and II, Monetary Policy. *Undergraduate*—Antitrust, Industrial Organization, Mergers & Corporate Control, Microeconomics (Principles, and Intermediate), Topics in Competition and Regulation, International Economics, Macroeconomic Theory

U.S. Federal Communications Commission

Chief Economist, June 2011–December 2012

Work included: Level 3/Global Crossing merger, Universal Service reform, Verizon/SpectrumCo transaction

President's Council of Economic Advisers

Senior Staff Economist, June 1995–May 1996 (part-time consultant April & May 1995, June 1996)

Served as the senior economist responsible for antitrust, regulated industries, and other industrial organization matters. Work included: Telecommunications Act of 1996, competition in international satellite services, competition in the electric utility industry, reforming the patent and trademark office, intellectual property rights, international trade disputes, health care.

U.S. Department of Justice, Antitrust Division

Acting Deputy Assistant Attorney General for Economics, January 1999–June 1999

Economics Director of Enforcement, September 1998–April 2000

In these positions, I was responsible for overseeing economic analysis at the Antitrust Division of numerous mergers and non-merger matters in various industries, including:

Mergers & Joint Ventures—Ameritech/SBC, Bell Atlantic/GTE, AT&T/BT, Cargill/Continental, Aetna/Prudential, CBS/Viacom
Monopolization—suit against American Airlines for predatory pricing
Regulatory—Bell entry into long-distance telecommunications services

Outside Expert for DOJ —publicly disclosed cases (consulting for other parties available on request)

UPM-Raflatac/Bemis-MACtac merger, 2003—testified at trial

News Corp-DirectTV partial acquisition, 2003

General Electric/Honeywell merger, 2000-2001

WorldCom/Sprint merger, 2000 (economic expert on the Internet backbone issues)

Bell entry, 1996–1997—DOJ’s outside economic expert on Bell entry into long-distance services under section 271 of the Telecommunications Act, and submitted two affidavits to the FCC

Economist, January 1983–May 1995 (part-time), October 1980–December 1982 (full-time).

Expert Testimony: Presented written and oral court testimony in successful challenges of merger and of consent decree

Mergers: Investigated mergers in several industries and helped to design appropriate relief

Business Practices: investigated vertical-restraints (tying, exclusive dealing, resale price maintenance, exclusive territories) and horizontal conduct (collusion and predation)

Legislation, Congressional Matters, Division Reports: Provided input to Antitrust Division’s Horizontal Merger Guidelines (1992) and Vertical Restraints Guidelines (1984). Helped draft Division comments on various Congressional legislation and drafted responses to inquiries in several areas, including price discrimination and dealer termination.

Cooperation with Foreign Competition Authorities: Subjects included predatory pricing, price discrimination, distribution systems, sole import distributorships, joint R&D, and the interaction between trade and competition policies

Other Professional Experience

Compass Lexecon, Senior Consultant (since April 2015))

Review of Network Economics, Editorial Board Member (2009-present)

International Competition Network, Merger Working Group, Academic Co-Chair (2009-2011)

U.S. Federal Trade Commission: Consultant (2010)

Bates White LLC, Senior Academic Affiliate (2007-2015)

New Zealand Commerce Commission: Consultant (2005-6)

Consultant in private antitrust and regulatory matters—details and references available on request

OECD: Lecturer in Seminar on Vertical Restraints for competition officials from Czech Republic, Hungary, Poland, and Slovakia in Cracow, Poland, November 20-22, 1995

ILADES: Participated in designing and teaching a short course in industrial organization to policy makers and executives in Santiago, Chile, June 1994

Pew Freedom Fellows Program: Taught short course in microeconomics to twenty Fellows from transition economies, annually, January 1993–1999. (Fellows hold middle-level or upper-level positions in government and private business.)

Center for Economic Development, Slovakia: Academic Advisory Board

World Bank: Consultant

Abt Associates/USAID: Advised Government of Zimbabwe in Harare on formulating antitrust law, summer 1993 (consultant to Abt, work funded by USAID's Implementing Policy Change Project)

LANGUAGES

French, Hebrew, Romanian (speak and read Hebrew fluently; proficient in French and Romanian)

HONORS

International Journal of Industrial Organization, Certificate of Reviewing Excellence, 2014
Georgetown University, Department of Economics: Excellence in Undergraduate Teaching Award, 2001 and 2010

U.S. Department of Justice, Antitrust Division: Special Achievement Awards

Brookings Institution: Research Fellow, 1979-1980

University of California, Los Angeles: Earhart Fellowship, 1977-1978

University of California, Los Angeles: Regents Fellowship, 1976-1977

London School of Economics: Premchand Prize in Monetary Economics, 1976

PUBLICATIONS

Refereed Journals

"Differential Pricing When Costs Differ: A Welfare Analysis," (with Yongmin Chen), *RAND Journal of Economics*, 46, issue 2 (2015): 442-460.

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- “Strategic Incentives When Supplying to Rivals,” (with Serge Moresi), Georgetown University, Department of Economics, Working Paper 15-15-05, June 2015. Latest version at: <http://mariusschwartz.com/Home/Research.html>
- “Differential Pricing When Costs Differ: A Welfare Analysis,” (with Yongmin Chen), Georgetown University, Department of Economics, Working Paper 1301, April 2013. Revised December 2013. Latest version at: <http://mariusschwartz.com/Home/Research.html>
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- “Interconnection Incentives of a Large Network Facing Multiple Rivals,” (with David Malueg), Georgetown University, Department of Economics Working Paper 03-01, January 2003. <http://econ.georgetown.edu/research/33243.html>
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- “Exclusive Dealing, Product Differentiation, and Rent Extraction,” in progress (with Serge Moresi and Francis O’Toole).
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Declaration of Marius Schwartz for SBC/AT&T in FCC, WC Docket 05-65, February 2005. <<http://fjallfoss.fcc.gov/ecfs/document/view?id=6517309104>>

“Should Antitrust Assess Buyer Market Power Differently than Seller Market Power?” presented at DOJ/FTC Workshop on Merger Enforcement, Washington DC, February 2004. <<http://www.ftc.gov/bc/mergerenforce/presentations/040217schwartz.pdf>>

“The National Television Ownership Cap and Localism,” paper submitted with Comments of NAB and NASA to FCC in *2002 Biennial Regulatory Review - Review of the Commission’s Broadcast Ownership Rules and Other Rules*, FCC 02-249, Notice of Proposed Rulemaking (rel. Sep. 23, 2002), January 2, 2003 (with Daniel R. Vincent).

“Are Spectrum Limits Needed to Preserve Competition?” paper submitted on behalf of CTIA to FCC in *2000 Biennial Regulatory Review Spectrum Aggregation Limits for Commercial Mobile Radio Services*, WT Docket No. 01-14, Notice of Proposed Rulemaking (rel. Jan. 23, 2001), April 13, 2001 (with John Gale).

“The Appropriateness of Nondiscriminatory Access Regulation for Interactive Television,” paper submitted on behalf of NCTA to FCC in *Nondiscrimination in the Distribution of Interactive Television Services Over Cable*, CS Docket No. 01-7, Notice of Inquiry (rel. Jan. 18, 2001), March 19, 2001 (with John Gale).

“Buyer Power Concerns and the *Aetna-Prudential* Merger,” Address presented at 5th Annual Health Care Antitrust Forum, Northwestern University School of Law, October 20, 1999, posted on web site of Antitrust Division, U.S. Department of Justice. <<http://www.usdoj.gov/atr/public/speeches/3924.htm>>

“Intelsat Restructuring and Comsat’s Non-Dominance: Reply to Dr. Owen and Professor Waverman,” paper filed on behalf of Comsat Corporation with the FCC, *In the Matter of Comsat Corporation Petition for Forbearance from Dominant Carrier Regulation and for Reclassification As a Non-Dominant Carrier*, (“Comsat’s Forbearance Petition”) File No. 60-SAT-ISP-97, March 1998.

“Competition in International Satellite Services: Wither INTELSAT Restructuring?” paper filed on behalf of Comsat with the FCC in Comsat’s Forbearance Petition, November 1997.

“Competitive Concerns with Gaming of the International Settlements Process under Asymmetric Liberalization of International Telecommunications and Above-Cost Settlement Rates,” Affidavit submitted on behalf of AT&T to FCC, in proceedings on *Rules and Policies on Foreign Participation in the U.S. Telecommunications Market*, IB 97-142, November 18, 1997.

“The ‘Open Local Market Standard’ for Authorizing BOC InterLATA Entry: Reply to BOC Criticisms,” Supplemental Affidavit submitted on behalf of U.S. DOJ to FCC, with DOJ’s evaluation of following BOC applications for 271 approval: BellSouth in South Carolina, November 4, 1997 and in Louisiana, December 10, 1997.
<www.justice.gov/atr/public/comments/sec271/bellsouth/1281.pdf>.

“Competitive Implications of Bell Operating Company Entry into Long-Distance Telecommunications Services,” Affidavit submitted on behalf of U.S. Department of Justice (DOJ) to FCC, with DOJ’s evaluation of following BOC applications for 271 approval: SBC in Oklahoma, May 16, 1997; Ameritech in Michigan, June 25, 1997; and BellSouth in South Carolina, November 4, 1997 and in Louisiana, December 10, 1997.
<www.justice.gov/atr/public/comments/sec271/sbc/affiwp60.htm>

“Towards Competition in International Satellite Services: Rethinking the Role of INTELSAT,” paper distributed at OECD Ad Hoc Meeting of Experts on Competition in Satellite Services, Paris, June 1995 (with Joseph E. Stiglitz and Eric Wolff).

“Competitive Markets in Generation: Economic Theory and Public Policy,” presented at conference on “Electric Utility Restructuring: Whither Competition?” organized by International Association for Energy Economics Los Angeles Chapter, and Micronomics Inc., Los Angeles, May 1995.

OTHER SCHOLARLY ACTIVITIES

Seminars Presented

Auburn University
Bellcore
Bureau of Competition Policy, Industry Canada
California State University, Hayward
Center for Strategic and International Studies
Columbia University
ENSAE, Paris
Federal Reserve Bank of Philadelphia
Georgetown University
George Washington University
U.S. International Trade Commission
Israel Antitrust Authority
Johns Hopkins University
New York University – Economics Department
New York University – Stern School of Business
Northeastern University
Pennsylvania State University
Simon Fraser University
Tel Aviv University – Graduate School of Business Administration
Tel Aviv University – Law School
Tulane University
University of Alberta
University of British Columbia
University of Calgary
University of California, Davis
University of California, Los Angeles
University of Colorado, Boulder
University of Illinois
University of Maryland
University of Missouri
University of Montreal

University of Pennsylvania
University of Toronto
University of Virginia
U.S. Department of Justice
U.S. Federal Communications Commission
U.S. Federal Trade Commission

Conferences: Speaker, Discussant, or Panelist

- Northwestern University School of Law, Eight Annual Searle Center Conference on Antitrust Economics and Competition Policy, Chicago, September 2015
- Bates White, Twelfth Annual Antitrust Conference, Washington, DC, June 2015
- Silicon Flatirons Center (University of Colorado) and Searle Center (Northwestern Law School), Cable Academic Workshop, Chicago, May 2015
- University of International Business and Economics, Workshop on Industrial Organization and Competition Policy, Beijing, China, March 2015
- DC Industrial Organization Conference, Washington, DC, March 2015
- Federal Communications Bar Association, Vertical Mergers, Washington, DC, November 2014
- Silicon Flatirons and USC Cable Workshop, Los Angeles, CA, April 2014
- DC Industrial Organization Conference, Washington, DC, March 2014
- Telecommunications Policy Research Conference, Washington, DC, September 2013
- US Army War College, 2013 Commandant's National Security Program, Carlisle, PA, July 2013
- Zhejiang University School of Economics, 2013 Conference on Industrial Economics, Hangzhou, China, June 2013
- Bates White, Tenth Annual Antitrust Conference, Washington, DC, June 2013
- International Industrial Organization Conference, Boston, May 2013
- The Interdisciplinary Centre for Competition Law and Policy (Queen Mary College, London) and Crowell & Moring LLP Annual Conference, "Trends and Developments in Global Competition Law," Brussels, May 2013
- George Mason University School of Law, "From Monopoly to Competition or Competition to Monopoly? U.S. Broadband Markets in 2013," Arlington, VA, April 2013
- Federal Communications Bar Association, Verizon/SpectrumCo: Anatomy of a Transaction, Washington, DC, January 2013
- Northwestern University School of Law, Fifth Annual Searle Center Conference on Antitrust Economics and Competition Policy, Chicago, September 2012
- Shanghai University of Finance and Economics, Workshop on IO and Competition Policy, Shanghai, China, June 2012
- Zhejiang University School of Economics, 2012 Conference on Industrial Economics, Hangzhou, China, June 2012
- International Industrial Organization Conference, Arlington, VA, March 2012
- Free State Foundation Telecommunications Symposium, Washington, DC, March 2012
- Phoenix Center for Advanced Legal & Economic Public Policy Studies, Annual U.S. Telecoms Symposium, Washington, DC, December 2011
- Bates White, Eighth Annual Antitrust Conference, Washington, DC, June 2011
- American Antitrust Institute, 11th Annual Conference, "Public and Private: Are the Boundaries in Transition," Washington, DC, June 2010
- Bates White, Seventh Annual Antitrust Conference, Washington, DC, June 2010
- U.S. House of Representatives, Judiciary Committee, "Understanding Antitrust Debates: A Primer," joint presentation with Professor Andy Gavil, Washington DC, March 2010
- New York University Law School, Annual Survey of American Law – 2010 Symposium: Critical Directions in Antitrust, New York, February 2010
- FTC/DOJ, Horizontal Merger Guidelines Review Project, First Workshop, Washington, DC, December 2009
- Phoenix Center for Advanced Legal & Economic Public Policy Studies, Ninth Annual U.S. Telecoms Symposium, Washington, DC, December 2009
- FCC, Broadband Competition Workshop, Washington, DC, October 2009

- Telecommunications Policy Research Conference, Washington, DC, September 2009
- Bates White, Sixth Annual Antitrust Conference, Washington, DC, June 2009
- American Bar Association, Panel Discussion on “The Google/Yahoo! Agreement and Its Implications for Future Antitrust Enforcement in Online Advertising,” Washington, DC, January 2009
- The Interdisciplinary Centre for Competition Law and Policy and Crowell & Moring LLP Annual Conference 2008, “Trends and Developments in Global Competition Law,” Brussels, May 2008
- Georgetown University Center for Business and Public Policy, “Spectrum Policy: From its Foundations to its Future,” Washington, DC, April 2008
- Bates White, Fourth Annual Antitrust Conference, Washington, DC, June 2007
- International Industrial Organization Conference, Savannah, GA, April 2007
- Georgetown University Center for Business and Public Policy, “What Economics Does and Does Not Tell Us about Net Neutrality,” Washington, DC, March 2007
- FTC, Broadband Connectivity Competition Policy Workshop, Washington, DC, February 2007
- George Mason University School of Law, “Stepping Stones or Stumbling Blocks: Lessons from the Telecom Wars,” Arlington, VA, September 2006
- Institut d’Economie Industrielle, “Competition Policy in Two-Sided Markets,” Toulouse, France, June/July 2006
- Bates White, Third Annual Antitrust Conference, Washington, DC, June 2006
- Federal Reserve Bank of New York, “Antitrust Activity in Card-Based Payment Systems: Causes and Consequences,” New York, NY, September 2005
- Institut d’Economie Industrielle, “The Economics of Electronic Communication Markets,” Toulouse, France, October 2004
- DOJ/FTC, Merger Enforcement Workshop, Washington, DC, February 2004
- Cosmos’ Club, 125th Anniversary Symposium, “The Changing Nature of Business 1878-2003,” Washington, DC, December 2004
- DOJ/FTC, Hearings on Health Care and Competition Law and Policy, Washington, DC, April 2003
- International Industrial Organization Conference, Boston, MA, April 2003
- Georgetown University McDonough School of Business, “Integration, Investment and Innovation: Future Directions for the Telecommunications Industry,” Washington, DC, February 2003
- University of Colorado School of Law, “The Regulation of Information Platforms,” Boulder, CO, January 2002
- Phoenix Center for Advanced Legal & Economic Public Policy Studies, U.S. Telecoms Symposium, Washington, DC, July 2001
- Practising Law Institute, “Antitrust and Trade Practices Issues in Cyberspace,” New York, NY, March 2001
- Telecommunications Policy Research Conference, Washington, DC, September 2000
- Schwab Capital Markets LP, Washington Research Group, “Telecom, Internet and Ecommerce Conference,” Washington, DC, September 2000
- AEI-Brookings Joint Center for Regulatory Studies and Centre for European Policy Studies, semi-annual meetings, “Experiences with Telecommunications Deregulation,” Washington, DC, April 2000
- University of Colorado School of Law, “Telecommunications After Bell Entry,” Boulder, CO, April 2000
- American Bar Association Section of Antitrust Law, 48th Annual Antitrust Spring Meeting, Washington, DC, April 2000
- Institute of the Americas, “Telecom-IT Americas ‘99 Conference,” La Jolla, CA, November 1999
- Northwestern University School of Law, 5th Annual Health Care Antitrust Forum, Chicago, IL, October 1999
- OECD, “Regulatory Reform in Japan, Mexico, the Netherlands and the United States,” Paris, France, March 1999
- Federal Communications Bar Association Competition Committee, Symposium, Washington DC, January 1999
- Conference on Current Topics in Merger and Antitrust Enforcement, Charles River Associates, Washington DC, December 1998
- Robert Schuman Centre of the European University Institute, Conference on Anticompetitive Regulation, Florence, Italy, September 1999
- American Bar Association Section of Antitrust Law, 47th Annual Antitrust Spring Meeting, Washington, DC, April 1999

- Telecommunications Policy Research Conference, Washington, DC, September 1997
- Canadian Bureau of Competition, Telecommunications seminar series, Ottawa, Canada, September 1997
- The World Bank, Competition Policy Workshop, Washington, DC, June 1997
- Federal Communications Commission, Economics of Interconnection Forum, Washington DC, May 1996
- Canadian Bureau of Competition, Authors' Symposium on Competition Policy and Intellectual Property Rights, Aylmer, Quebec, Canada, May 1996
- Electric Generation Association, Annual Meetings, West Palm Beach, FL, April 1996
- Illinois State University and the Institute of Government and Public Affairs, University of Illinois-Urbana, "Wheeling & Dealing: Opportunities and Challenges in the New Electric Industry," Chicago, April 1996
- OECD, "New Social and Economic Approaches to a Multimedia World," Symposium, Tokyo, Japan, March 1996
- Center for Economic Development, "Telecommunications and Energy Regulation in Transition Economies," Bratislava, Slovakia, October 1995
- International Association for Energy Economics Los Angeles Chapter, and Micronomics Inc., "Electric Utility Restructuring: Whither Competition?" Los Angeles, CA, May 1995
- Canadian Bureau of Competition, "New Learning on Barriers to Entry in Competition Policy," Ottawa, Canada, March 1995
- Southeastern Economic Theory Meetings, Charlottesville, VA, October 1994
- EARIE Conference, Tel Aviv, Israel, September 1993
- Midwest International Economics Meetings, Pittsburgh, PA, October 1992
- Latin American Econometric Society, Mexico City, Mexico, September 1992
- Carleton University, Conference on Industrial Organization, Ottawa, Canada, July 1991
- SUNY at Stony Brook, Workshop on Strategic and Dynamic Aspects of International Trade, Stony Brook, NY, July 1991
- AEI Conference on "Innovation, Intellectual Property and World Competition," Washington, DC, September 1990
- EARIE Conference, Lisbon, Portugal, September 1990
- Conference on International Trade and Technology, Brussels and London, November 1989
- EARIE Conference, Budapest, Hungary, August 1989
- Dundee University, Conference on Strategy and Market Structure, Dundee, Scotland, August 1988
- Stanford University Graduate School of Business, Conference on Firm Ownership and Competition, Palo Alto, CA, Business, June 1987
- EARIE Conference, Berlin, Germany, August 1986
- AEA Annual Meetings, Dallas, TX, December 1984

Referee for Professional Journals

American Economic Review
Canadian Journal of Economics
Economica
Economic Journal
Economics Letters
European Economic Review
European Journal of Political Economy
International Economic Review
International Journal of Industrial Organization
Journal of Business
Journal of Business Economics
Journal of Economic Behavior and Organization
Journal of Economic Dynamics and Control
Journal of Economic Education
Journal of Economic Theory
Journal of Economics and Management Strategy

Journal of Industrial Economics
Journal of International Economics
Journal of Law & Economics
Journal of Political Economy
Managerial and Decision Economics
Quarterly Journal of Economics
Quarterly Review of Economics and Business
RAND Journal of Economics
Review of Industrial Organization
Review of International Economics
Scandinavian Journal of Economics
Southern Economic Journal

Outside Evaluator—Research Proposals and Tenure & Promotion Cases

City University of New York
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Northwestern University School of Law
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University of California at Los Angeles
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University of Missouri, Columbia
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